Teachers' Retirement Board
Investment Committee
Open Session

Subject: Real Estate - Role of Real Estate **Item Number: 7**

Attachment (s): 2

Action: X **Date of Meeting: April 1, 1998**

Information: _____ **Presenters: Mr. Pleis**
Ms. Gerardo Leitz

EXECUTIVE SUMMARY

One of the 1997/98 objectives approved for the Investment Branch was to evaluate the appropriate risk and return composition of the real estate portfolio considering traditional, opportunistic, and securitized components. The first step to completing this objective was accomplished in January, 1998 with the selection of Pension Consulting Alliance (PCA) as STRS real estate consultant. Attachment 1 provides a review of the asset allocation for real estate, an overview of the real estate investment sector, a historical review of STRS real estate portfolio, and the characteristics of STRS' real estate portfolio.

Attachment 2 provides an analysis of the role of real estate, a discussion of investment real estate risk, analysis of STRS' real estate portfolio's risk/return characteristics, sensitivity analysis of different real estate portfolios risk/return profiles, and a peer group comparison of various real estate strategies.

RECOMMENDATIONS

1. Staff and PCA recommend that the primary role of real estate is to provide diversification and cash flow. Real estate's secondary role will emphasize yield enhancement.

2. Staff and PCA recommend the Investment Committee approve the risk/return profile for a composite real estate portfolio that includes 75% low to moderate risk assets and 25% moderate to high risk assets.

ATTACHMENT 1
ITEM 7

THE ROLE OF REAL ESTATE

Background

During a series of asset allocation workshops presented in 1997, the Investment Committee, assisted by Pension Consulting Alliance (PCA), reviewed STRS' overall asset allocation. At the Investment Committee's direction, PCA developed a set of constraints within which to model the various asset classes. The result of this process was to create an efficient frontier with expected risks and returns that were designed to meet the STRS' actuarial and financial goals.

The asset allocation policy, adopted in June 1997, included a 5% allocation to real estate as indicated in the table below:

Asset Class	**6/30/95 Policy**	**6/30/97 Policy**
Alt. Investments	3%	5%
Int'l Stocks/Emerging Mkts	18%	25%
Domestic Stocks	34%	38%
Real Estate	**5%**	**5%**
Global TAA	5%	0%
Global Fixed income	*0%*	*26%*
Fixed Income	*34%*	*0%*
Cash	1%	1%

In July 1997, the Investment Committee adopted the 1997/98 Investment Branch objectives. One of the objectives for the Real Estate Area was to develop the appropriate risk and liquidity composition of the real estate portfolio considering traditional, opportunistic and securitized components. A timeline and action plan for completing this objective was presented and approved. The first aspect was the selection of a real estate consultant. Pension Consulting Alliance/E&Y Kenneth Leventhal (PCA/EYKL) was selected in January 1998 to provide real estate consulting services to the Teachers' Retirement Board to assist in the identification and presentation of the role of real estate in the investment portfolio.

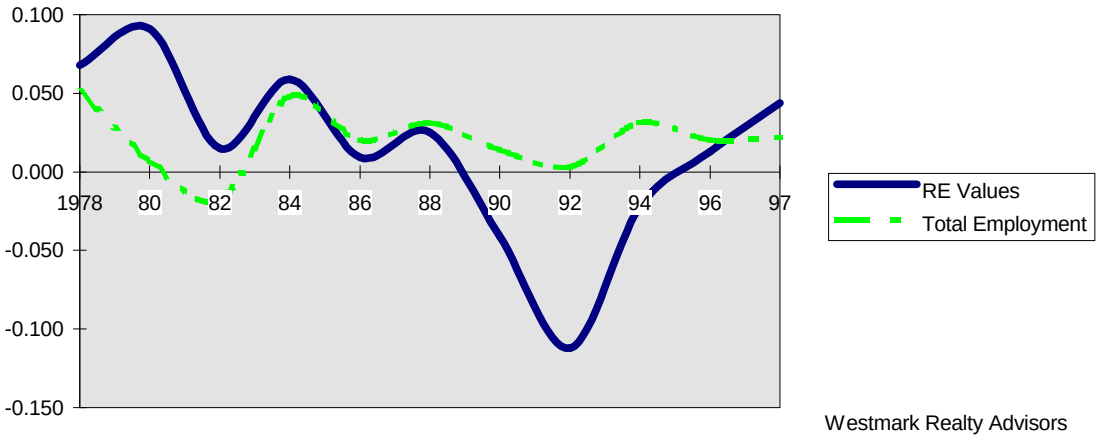
Real Estate Overview

Financial institutions began investing in real estate in the late 1970's, stimulated by real estate's attractive returns during the previous ten year period and the emphasis given to diversification with the implementation of ERISA. Today, financial institutions (i.e. banks, savings & loans, insurance companies and pension funds) continue to seek the positive characteristics of investment real estate for their portfolios. Investment real estate has stable cash flow, low correlation with other investments, and potential higher returns. These characteristics have made investment real estate attractive to financial institutions as an asset class since the late 1970's.

Investment real estate within the pension fund industry has been subject to price volatility or cyclical changes in value like other asset classes. During the late 1980's, the pension fund industry invested large amounts of capital into investment real estate. Later changes in the supply of capital, changes in tax laws, and changes in economic activity in the United States created a supply/demand imbalance which had a negative effect on real estate values countrywide.

Investment real estate values are also subject to various local and regional pressures. Primary factors effecting investment real estate are regional employment growth and local market supply/demand equilibrium. The following table shows the correlation between employment growth and real estate values.

Change in Real Estate Values (NCREIF) vs.
Change in Total U.S. Employment

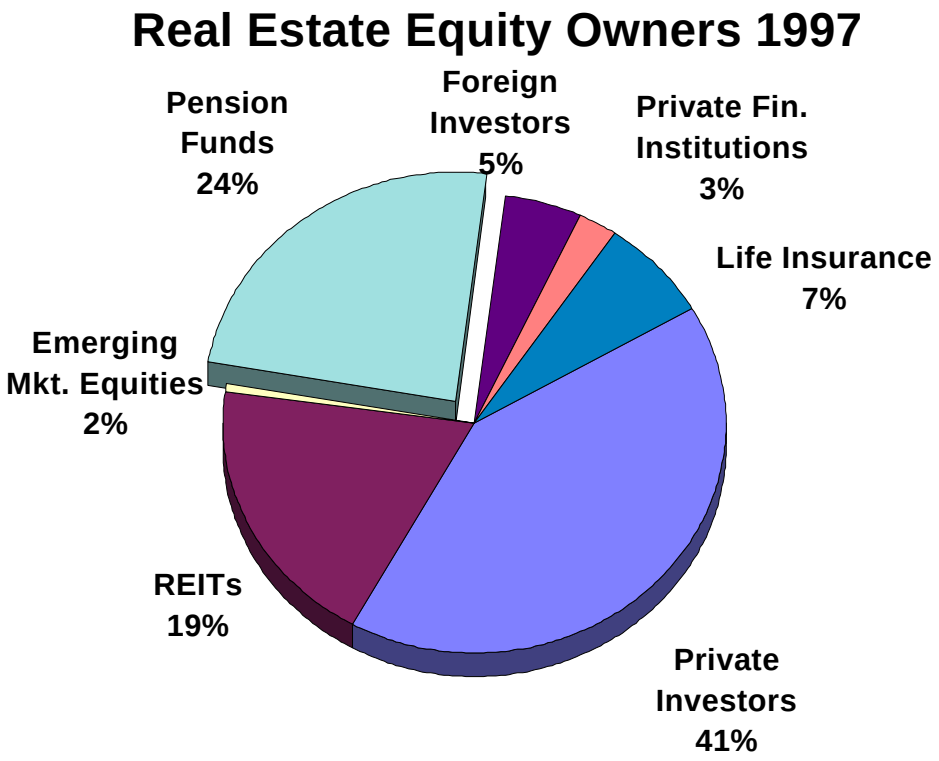


Westmark Realty Advisors

Size Of The Investable Real Estate Market

Real estate comprises an estimated 54% of global wealth. In the United States, it is estimated that real estate represents 45% of all assets. Approximately, 50% of real estate assets are private residential, 25% are Government non-residential, and the remainder is private non-residential. It is predominately the private non-residential sector that financial institutions utilize for their real estate investments.

ERE Yarmouth research estimates that the potential investable U.S. real estate market is $3.2 trillion. The current ownership of the United States investable real estate equity market is estimated at $572 Billion. The largest components of this market are private investors (41%) and pension funds (24%). The following graph identifies the real estate equity owners as of December 1997.



The size of the investable international real estate market is difficult to accurately assess given the various languages, cultures, and currencies. However, an estimated 400 public real estate companies exist in Canada, Asia, and Europe having a total market capitalization of approximately $215 billion.

Characteristics Of Investment Real Estate

Over the last twenty years, pension funds have accumulated approximately $138 billion of investment real estate in their portfolios. The risk and return characteristics of investment real estate can differ substantially. Three real estate risk scenarios are identified below:

Low Risk Scenario - Purchase an industrial building with tenant occupancy at 90% and no leverage placed on the property.

Moderate Risk Scenario - Purchase an industrial building with tenant occupancy at 50% and secure a 30% loan.

High Risk Scenario - Purchase industrial land to build an industrial building for resale and secure a 75% loan on the property.

Investment real estate can be categorized into a risk and return spectrum comprised of low risk, moderate risk, and high risk. The following table reflects the characteristics of the three categories of risk:

Low Risk

- Expected 4%-6% real rate of return
- Traditional property type (industrial, office, apartment and retail)
- Substantially leased properties at acquisition
- No leverage on the property
- Cash flow from property is the largest component of value
- Large and diverse geographic areas

Moderate Risk

- Expected 6%-12% real rate of return
- Some lease-up risk
- Public securities (REIT, real estate company)
- Moderate leverage(20%-60% loan to value)
- Specialized property type (Timber, Hotel)
- Non economically diversified geographic areas

High Risk

- Expected 12%-20% real rate of return
- Land development
- High leverage(75% or higher loan to value)
- Appreciation largest component of value
- Currency or political (international)

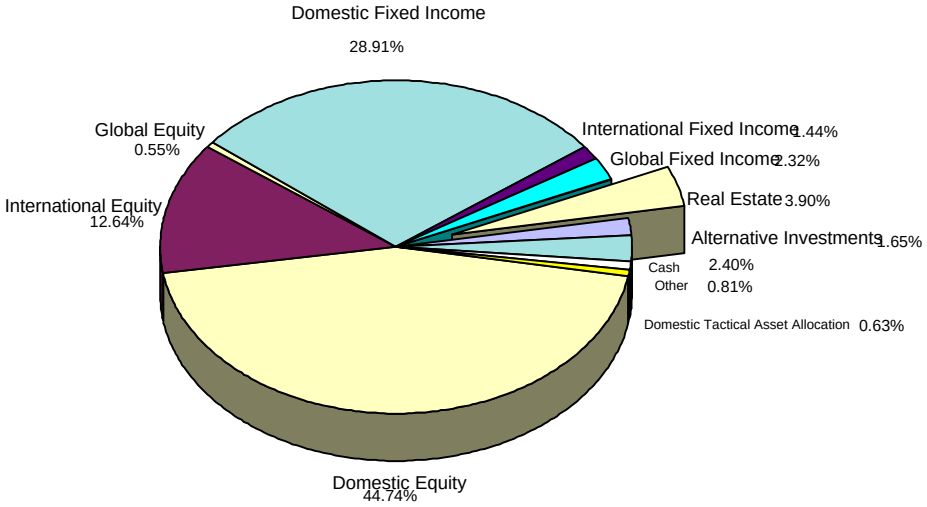
Changing Risk Profile For Real Estate

In the early 1990's, institutional investors began to shift their focus on real estate investing from low risk to moderate or high risk. This shift in risk tolerance was due in part to the early success of the opportunistic funds. Since 1991, a substantial amount of new real estate investments for institutional real estate investors have been in opportunity funds and real estate investment trusts (REIT). The opportunity funds represent high risk/return characteristics for institutional investors and have grown to approximately $20 billion in committed equity. The REIT market represents, in general, a moderate real estate risk/return profile. The REIT market has increased from $12 billion in 1992 to nearly $100 billion in 1997. PCA/EYKL has included a chart in Attachment 2 that reflects the current real estate strategy of selected peer group pension funds.

Real Estate Allocations For Pension Funds

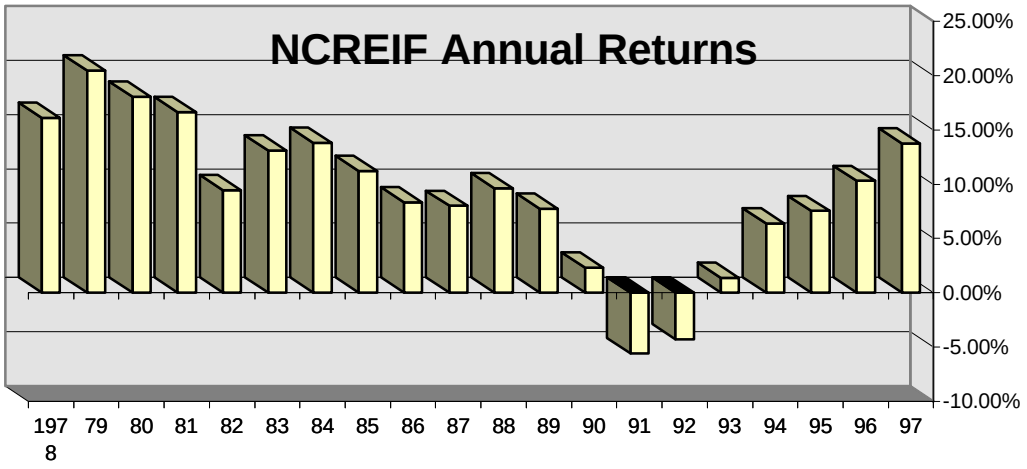
Since the early 1980's pension funds have targeted an allocation to real estate in the 5% to 15% range depending on various investment strategies. Like STRS, most pension funds remain under funded in real estate in relationship to their asset allocation targets. A recent survey by the Institute of Fiduciary Education (IFE) of public pension funds revealed that 77% of the public funds surveyed have not funded to their stated target. For the 121 public funds surveyed, the average actual amount funded to real estate was 3.9%. Also, 68% of public funds in the IFE Network have included real estate investments in their asset allocation process. The following chart reflects asset allocation by public pension funds as reported to IFE.

Please note: Attachment 2 is not available in electronic format at this time.



Performance Benchmark and Benchmark Returns

The primary performance benchmark for real estate has been the NCREIF Index. This Index has been a proxy for low risk institutional real state since 1979. The NCREIF Index consists of 2600 properties with a market value of $60 billion. The property type composition of this Index is primarily office, industrial, retail, and apartment. The following graph shows total composite unleveraged returns for the NCREIF Index since 1979. The NCREIF Index measures the return characteristics of low risk real estate.



The primary benchmark for the public REIT securities market is the NAREIT Index. The NAREIT Index has an approximate market value of $100 billion. Given the daily pricing of REITs and the correlation with the stock market, this Index has been more volatile than NCREIF Index. The NAREIT Index differs from the NCREIF Index in that it takes into consideration leverage, management company value, growth potential, and stock market volatility.

Currently, there is no industry benchmark for measuring the returns for high risk real estate investments. Given the recent investment activity in opportunity funds to employ high risk strategies, there remains a potential that an index or sample of funds could be established as a measure of performance for high risk real estate investments.

Real Estate Investment Structures

Public pension funds invest and hold real estate in basically three different investment structures. These are **direct ownership, commingled fund, and public securities**. A recent survey by IFE shows that public pension funds hold real estate assets as follows: 64% direct ownership, 21% commingled funds, 7% public securities and 8% in a combination of joint ventures and hybrid structures. The following is a summary of the respective characteristics of the three main investment structures.

Direct Ownership

- Control of buy, sell, and asset management
- Moderate liquidity
- Control of management cost structure
- Generally, fee simple 100% ownership

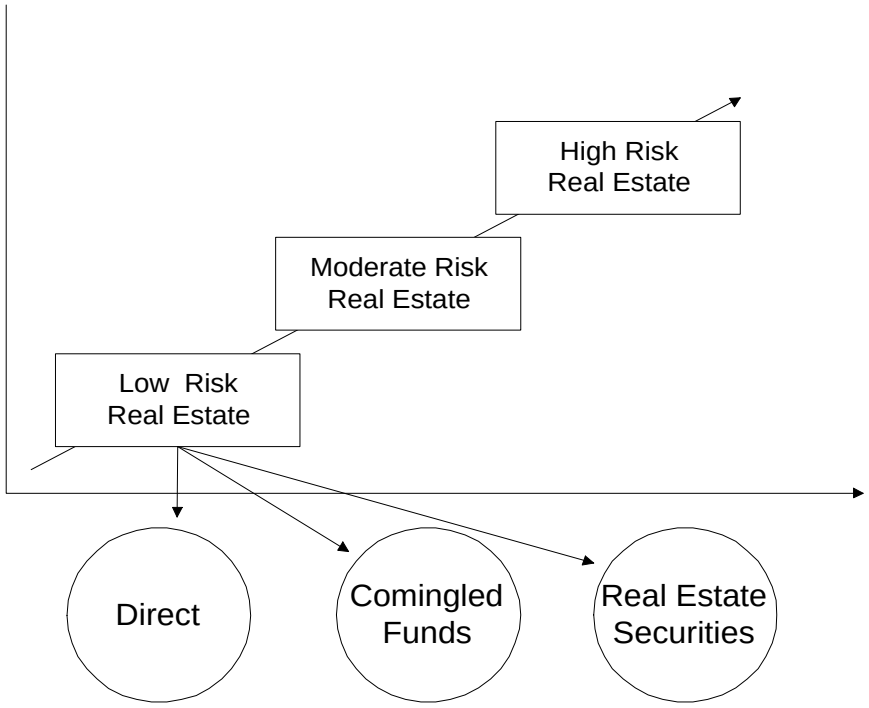
Commingled Fund

- No control of buy, sell, or asset management
- Limited liquidity
- No control of cost structure
- Limited partnership or private securities structure

Public Securities

- Control of the buy and sell
- No control of asset management
- High Liquidity in limited amounts
- No control of cost structure
- Stock ownership

During the 1980's pension funds invested in low risk real estate through commingled funds and direct ownership. As pension funds changed their investment strategies in the early 1990's from low risk to moderate or high risk, the primary investment structures were commingled funds and public securities. The following chart illustrates that each investment structure can hold real estate at different risk levels.



STRS Real Estate Experience (1983-1997)

In 1983, with the implementation of Proposition 21, STRS was permitted to purchase real estate. About three years later, the first set of policies for investing in real estate was presented by Institutional Property Consultants (IPC). The primary role for real estate in the STRS portfolio was identified as diversification of assets. STRS designed a strategy to establish and maintain a portfolio of office, industrial, and retail properties. The property location, characteristics, and cash flow would be classified as low risk.

In 1991, IPC recommend expanding the risk level of the real estate portfolio. IPC recommended five new property types - apartments, timberland, hotels, and commercial land. The Investment Committee adopted one of the proposed property types - apartments.

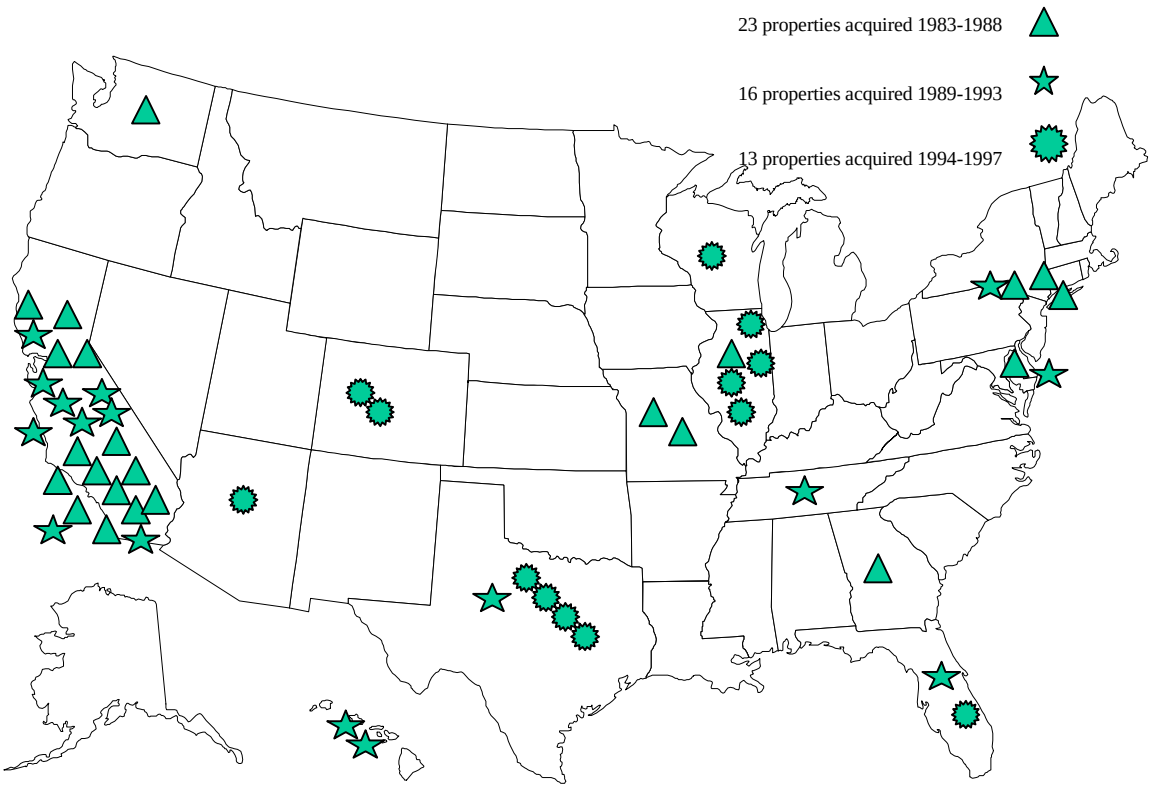
In 1995, IPC recommended expanding the risk level of the real estate portfolio through participation in opportunistic commingled funds. The Investment Committee approved three high risk funds: Colony Investors II, Lazard Freres Strategic Reality, and Morgan Stanley Real Estate Fund II.

STRS Accumulation Of Real Estate

By December 1992, STRS real estate portfolio had grown to 40 properties across the United States totaling $2.0 billion of market value. From 1987 to 1992, STRS averaged $237 million a year in acquisitions of low risk real estate. Over the next five years (1993-98), STRS acquired approximately $230 million while selling more than $500 million of low risk real estate.

In 1995, STRS committed $500 million to three opportunistic commingled funds. The net effect, of the last five years of purchase and sale activity, is that the market value of the real estate portfolio is unchanged ($1,992 million as of 12/31/92 compared to $2,003 million as of 12/31/97). The percentage of real estate has been reduced from 4.5% as of 12/31/92 to 2.5% as of 12/31/97 because of the substantial growth in other asset classes during that five year period.

The following map looks at STRS accumulation of real estate assets:



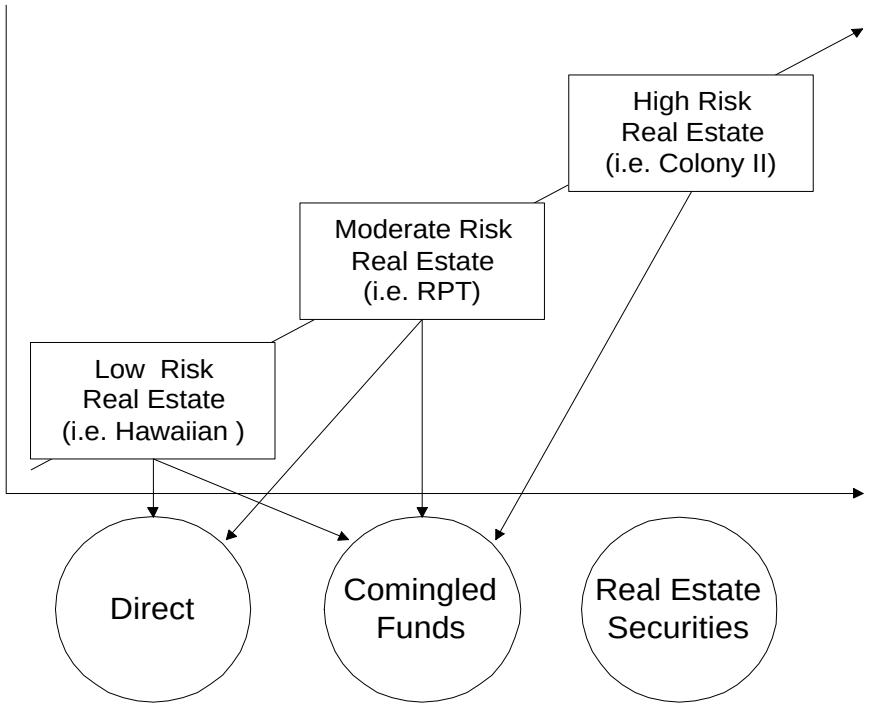
STRS Investment Structures For Real Estate

STRS primary investment structure since the beginning of the real estate program has been direct ownership. STRS currently holds 75% of it real estate portfolio in direct ownership and 25% in commingled funds. Currently, STRS holds no public REIT stocks within the real estate portfolio.

Like the real estate pension fund industry in general, STRS investment structures are not linked solely to accessing specific risk and return strategies. STRS used the commingled fund structure in acquiring:

(1) Hawaiian Property fund as a low risk strategy
(2) Retail Property Trust as a moderate risk strategy
(3) Colony Investors II as a high risk strategy

The following chart shows what investment structures STRS used to access various levels of risk:



STRS' Real Estate Portfolio And Performance History

The following exhibits provide information regarding the composition and performance history of the STRS' real estate portfolio. These exhibits will be utilized in the oral presentation at the April 1, 1998 Investment Committee.

1. Portfolio return history vs. NCREIF
2. Portfolio return history by product type vs. NCREIF
3. Portfolio return history by region vs. NCREIF
4. Portfolio investment structure
5. Manager concentration for direct investments
6. Fund concentration for commingled funds
7. Portfolio geographical diversification
8. Portfolio product type diversification
9. Portfolio economic concentration
10. Portfolio market value ranking, largest 15 properties
11. Portfolio historical cash flow vs. market value